

## SEQUENCE LISTING

<110> BRISSON, et al.

<120> PLANT TRANSCRIPTIONAL ACTIVATOR AND USES  
THEREOF

<130> 2006691-0002

<150> 10/561,053

<151> 2006-06-22

<160> 4

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 274

<212> PRT

<213> Artificial Sequence

<220>

<223> potato Stwhy1 protein sequence

<400> 1

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Met Ser Asn Phe Ser Leu Ser Pro Ser Pro Thr Ser Gly Phe Ser Leu
 1      5      10      15
Asn Leu Gln Asn Pro Thr Lys Thr Ser Tyr Leu Ser Phe Ser Ser Ser
 20      25      30
Ile Asn Thr Ile Phe Ala Pro Leu Ser Ser Asn Thr Thr Lys Ser Phe
 35      40      45
Ser Gly Leu Thr His Lys Ala Ala Leu Pro Arg Asn Leu Ser Leu Thr
 50      55      60
Cys Arg His Ser Asp Tyr Phe Glu Pro Gln Gln Gln Gln Gln Gln
 65      70      75      80
Gln Gln Gln Pro Gln Gly Ala Ser Thr Pro Lys Val Phe Val Gly Tyr
 85      90      95
Ser Ile Tyr Lys Gly Lys Ala Ala Leu Thr Val Glu Pro Arg Ser Pro
100      105      110
Glu Phe Ser Pro Leu Asp Ser Gly Ala Phe Lys Leu Ser Arg Glu Gly
115      120      125
Met Val Met Leu Gln Phe Ala Pro Ala Ala Gly Val Arg Gln Tyr Asp
130      135      140
Trp Ser Arg Lys Gln Val Phe Ser Leu Ser Val Thr Glu Ile Gly Ser
145      150      155      160
Ile Ile Ser Leu Gly Ala Lys Asp Ser Cys Glu Phe Phe His Asp Pro
165      170      175
Asn Lys Gly Arg Ser Asp Glu Gly Arg Val Arg Lys Val Leu Lys Val
180      185      190
Glu Pro Leu Pro Asp Gly Ser Gly His Phe Phe Asn Leu Ser Val Gln
195      200      205
Asn Lys Leu Ile Asn Leu Asp Glu Asn Ile Tyr Ile Pro Val Thr Lys
210      215      220
Ala Glu Phe Ala Val Leu Val Ser Ala Phe Asn Phe Val Met Pro Tyr
225      230      235      240
Leu Leu Gly Trp His Thr Ala Val Asn Ser Phe Lys Pro Glu Asp Ala
245      250      255
Ser Arg Ser Asn Asn Ala Asn Pro Arg Ser Gly Ala Glu Leu Glu Trp
260      265      270
Asn Arg

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<210> 2  
 <211> 263  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Arabidopsis whirly proteins Atwhy1

<400> 2  
 Met Ser Gln Leu Leu Ser Thr Pro Leu Met Ala Val Asn Ser Asn Pro  
 1 5 10 15  
 Arg Phe Leu Ser Ser Ser Ser Val Leu Val Thr Gly Gly Phe Ala Val  
 20 25 30  
 Lys Arg His Gly Phe Ala Leu Lys Pro Thr Thr Lys Thr Val Lys Leu  
 35 40 45  
 Phe Ser Val Lys Ser Arg Gln Thr Asp Tyr Phe Glu Lys Gln Arg Phe  
 50 55 60  
 Gly Asp Ser Ser Ser Ser Pro Ser Pro Ala Glu Gly Leu Pro Ala Arg  
 65 70 75 80  
 Phe Tyr Val Gly His Ser Ile Tyr Lys Gly Lys Ala Ala Leu Thr Val  
 85 90 95  
 Asp Pro Arg Ala Pro Glu Phe Val Ala Leu Asp Ser Gly Ala Phe Lys  
 100 105 110  
 Leu Ser Lys Asp Gly Phe Leu Leu Leu Gln Phe Ala Pro Ser Ala Gly  
 115 120 125  
 Val Arg Gln Tyr Asp Trp Ser Lys Lys Gln Val Phe Ser Leu Ser Val  
 130 135 140  
 Thr Glu Ile Gly Thr Leu Val Ser Leu Gly Pro Arg Glu Ser Cys Glu  
 145 150 155 160  
 Phe Phe His Asp Pro Phe Lys Gly Lys Ser Asp Glu Gly Lys Val Arg  
 165 170 175  
 Lys Val Leu Lys Val Glu Pro Leu Pro Asp Gly Ser Gly His Phe Phe  
 180 185 190  
 Asn Leu Ser Val Gln Asn Lys Leu Val Asn Val Asp Glu Ser Ile Tyr  
 195 200 205  
 Ile Pro Ile Thr Arg Ala Glu Phe Ala Val Leu Ile Ser Ala Phe Asn  
 210 215 220  
 Phe Val Leu Pro Tyr Leu Ile Gly Trp His Ala Phe Ala Asn Ser Ile  
 225 230 235 240  
 Lys Pro Glu Glu Thr Ser Arg Val Asn Asn Ala Ser Pro Asn Tyr Gly  
 245 250 255  
 Gly Asp Tyr Glu Trp Asn Arg  
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<210> 3  
 <211> 237  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Arabidopsis whirly proteins Atwhy2

<400> 3  
 Met Lys Gln Ala Arg Ser Leu Leu Ser Arg Ser Leu Cys Asp Gln Ser  
 1 5 10 15  
 Lys Ser Leu Phe Glu Ala Ser Thr Leu Arg Gly Phe Ala Ser Trp Ser  
 20 25 30  
 Asn Ser Ser Thr Pro Gly Arg Gly Phe Pro Gly Lys Asp Ala Ala Lys  
 35 40 45  
 Pro Ser Gly Arg Leu Phe Ala Pro Tyr Ser Ile Phe Lys Gly Lys Ala  
 50 55 60  
 Ala Leu Ser Val Glu Pro Val Leu Pro Ser Phe Thr Glu Ile Asp Ser  
 65 70 75 80

## 2006691-0002.txt

Gly Asn Leu Arg Ile Asp Arg Arg Gly Ser Leu Met Met Thr Phe Met  
 85 90 95  
 Pro Ala Ile Gly Glu Arg Lys Tyr Asp Trp Glu Lys Lys Gln Lys Phe  
 100 105 110  
 Ala Leu Ser Pro Thr Glu Val Gly Ser Leu Ile Ser Met Gly Ser Lys  
 115 120 125  
 Asp Ser Ser Glu Phe Phe His Asp Pro Ser Met Lys Ser Ser Asn Ala  
 130 135 140  
 Gly Gln Val Arg Lys Ser Leu Ser Val Lys Pro His Ala Asp Gly Ser  
 145 150 155 160  
 Gly Tyr Phe Ile Ser Leu Ser Val Asn Asn Ser Ile Leu Lys Thr Asn  
 165 170 175  
 Asp Tyr Phe Val Val Pro Val Thr Lys Ala Glu Phe Ala Val Met Lys  
 180 185 190  
 Thr Ala Phe Ser Phe Ala Leu Pro His Ile Met Gly Trp Asn Arg Leu  
 195 200 205  
 Thr Gly His Val Asn Thr Glu Ala Leu Pro Ser Arg Asn Val Ser His  
 210 215 220  
 Leu Lys Thr Glu Pro Gln Leu Glu Leu Glu Trp Asp Lys  
 225 230 235

&lt;210&gt; 4

&lt;211&gt; 267

&lt;212&gt; PRT

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; Arabidopsis whirly proteins AtWhy3

&lt;400&gt; 4

Met Ser Gln Leu Leu Ser Ser Pro Pro Met Ala Val Phe Ser Lys Thr  
 1 5 10 15  
 Phe Ile Asn His Lys Phe Ser Asp Ala Arg Phe Leu Ser Ser His Ser  
 20 25 30  
 Ile Leu Thr Ser Gly Gly Phe Ala Gly Lys Ile Ile Pro Leu Lys Pro  
 35 40 45  
 Thr Ala Arg Leu Lys Leu Thr Val Lys Ser Arg Gln Ser Asp Tyr Phe  
 50 55 60  
 Glu Lys Gln Arg Phe Gly Asp Ser Ser Ser Ser Gln Asn Ala Glu Val  
 65 70 75 80  
 Ser Ser Pro Arg Phe Tyr Val Gly His Ser Ile Tyr Lys Gly Lys Ala  
 85 90 95  
 Ala Leu Thr Ile Glu Pro Arg Ala Pro Glu Phe Val Ala Leu Glu Ser  
 100 105 110  
 Gly Ala Phe Lys Leu Thr Lys Glu Gly Phe Leu Leu Leu Gln Phe Ala  
 115 120 125  
 Pro Ala Ala Gly Val Arg Gln Tyr Asp Trp Ser Arg Lys Gln Val Phe  
 130 135 140  
 Ser Leu Ser Val Thr Glu Ile Gly Asn Leu Val Ser Leu Gly Pro Arg  
 145 150 155 160  
 Glu Ser Cys Glu Phe Phe His Asp Pro Phe Lys Gly Lys Gly Asp Glu  
 165 170 175  
 Gly Lys Val Arg Lys Val Leu Lys Val Glu Pro Leu Pro Asp Gly Ser  
 180 185 190  
 Gly Arg Phe Phe Asn Leu Ser Val Gln Asn Lys Leu Leu Asn Val Asp  
 195 200 205  
 Glu Ser Val Tyr Ile Pro Ile Thr Lys Ala Glu Phe Ala Val Leu Ile  
 210 215 220  
 Ser Ala Phe Asn Phe Val Leu Pro His Leu Ile Gly Trp Ser Ala Phe  
 225 230 235 240  
 Ala Asn Ser Ile Lys Pro Glu Asp Ser Asn Arg Leu Asn Asn Ala Ser  
 245 250 255  
 Pro Lys Tyr Gly Gly Asp Tyr Glu Trp Ser Arg

260

2006691-0002.txt  
265